

VOLTS NEWSLETTER

Valuing Our Lives Through Safety

August 2021, Volume 93

Casey Draper, Facilitator

Amy White, Editor

Maximum Output—Casey Draper

During the *dog days of summer* when the mercury rises, it isn't uncommon to see the demand for IPSC energy increase. With the high demand for electricity, our customers rely on the maximum output of 950 MW each generation unit produces. Preplanning, scheduling, and preventative maintenance are completed throughout the year by all crafts to ensure that we can supply the high demand when our generation units are called on for full load. While the generation units are at full load, each associated cooling tower evaporates roughly 6,400 gallons of water per minute.

While not on the same scale, our bodies naturally evaporate water through the skin during times of maximum output. Yes, sweating can be messy (and stinky), but it's our body's cooling mechanism and is used to help keep our internal temperatures at a comfortable 98.6 degrees. If we didn't sweat, our bodies would literally cook from the inside out.

Since many of us and our family members are involved in physical activities that can push our bodies to the limit, we need to be aware of the hazards associated with heat-related illnesses and be able to recognize the warning signs before they become medical emergencies. Dehydration can be a primary cause for a heat-related illness, and occurs when your body loses more fluid than is taken in—your body doesn't have enough water and other fluids to carry out its normal functions. Along with drinking enough water, it is also important to replenish your body with important minerals such as sodium, potassium, magnesium, and calcium that can be depleted through sweating. Once in our bodies, these minerals are broken down at the cellular level and help with hydration, energy production, heart rate, and muscle contraction.



Archery Hunt

Have you ever experienced the early signs of heat exhaustion such as muscle cramps or severe fatigue? During last year's archery hunt, two friends of mine learned a valuable life lesson and were fortunate they didn't end up with an emergency situation due to dehydration and heat exhaustion. These two hunters were on a backcountry mule deer hunt when one of them

harvested a mature high-country buck. By the time they finished breaking down the buck and loading it into their backpacks, it was around noon and the temperature was close to 90 degrees. While they prepared their heavy backpacks for the long hike out, they realized that they were nearly out of water and had about two miles to hike back to their spike camp. Once they returned to their camp, they were both dying of thirst but wanted to get the buck off the mountain before the meat spoiled. While loading up their camp, they talked about accessing water in the opposite direction of their truck, but decided to push through the next three miles without water.

After reaching a spot where they had cell phone service, they made a quick call to have their dad and brother meet them on the trail with some extra water. After another mile or so, they both started regretting the idea of not getting water. Both hunters' legs began to cramp and it was harder for them to walk. They realized that they were in a bad situation and couldn't wait to see their dad and brother with the extra water. With about a mile to go, they finally ran into their rescuers on the trail. They both dropped their packs and chugged down most of the water that had been brought. At that point, both hunters' bodies were so overheated that they had stopped sweating. Their legs were cramping so bad that their dad and brother ended up taking their packs the rest of the way down. After another hour of hiking, they finally reached the truck.

Maximum Output—Casey Draper, cont.

These two hunters definitely learned to always have water and take the extra time to stay hydrated. If it wasn't for their dad and brother meeting them, they probably wouldn't have made it all the way. Realizing now how bad their legs were cramping and how their bodies were unable to compensate for the extreme conditions, they now have a firsthand understanding of just how close they were to the point of heat stroke.

Knowing the Difference between Heat Exhaustion and Heat Stroke

Heat Exhaustion, early signs

- Heavy sweating
- Nausea
- Light-headedness
- Fatigue
- Muscle Cramping

Heat Stroke, requires immediate medical attention

- Headache
- Confusion
- No sweating
- Hot, red skin
- Rapid heart rate

The Dog Days of Summer

Many of us may have heard the phrase “the dog days of summer,” but what does it refer to? According to the *Farmer's Almanac (2021)*, the phrase actually came from the ancient Romans in reference to the time of summer from July 3 through August 11. This is the time when the sun occupies the same region of the sky as Sirius, the brightest star visible from any part of earth that is also part of the constellation *Canis Major*. In the summer, Sirius rises and sets with the sun, and the ancient Romans believed that it added to the sun's warmth and gave off heat because the star was so bright. Thus, this time of sultry weather is *diēs caniculārēs*, or “dog days.”

References

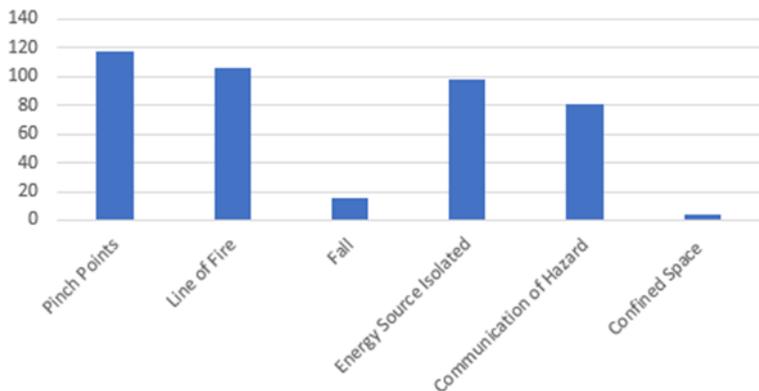
Farmer's Almanac (August 4, 2021) <https://www.farmersalmanac.com/why-are-they-called-dog-days-of-summer-21705>

CDC (n.d.) <https://www.cdc.gov/disasters/extremeheat/heattips.html>

Occupational Safety and Health Administration (n.d.) <https://www.osha.gov/sites/default/files/publications/osha3154.pdf>

VOLTS Data Report—Casey Draper

July 2021 Number of Critical Exposures Observed



IPSC Employee Observation Quality



IPSC Employee Contact Rate

0.8

2021 Top Five At-Risk Exposures

